

Practitioner's Docket No. 2960/112

PATENT

OCT 16 2006
U.S. PATENT & TRADEMARK OFFICE
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Lang et al.
Application No.: 10/681,749
Filed: October 7, 2003
For: Minimally Invasive Joint Implant with 3-Dimensional Geometry Matching
the Articular Surfaces

Group No.: 3733
Examiner: P. Philogene

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
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**TRANSMITTAL OF SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT
BEFORE MAILING DATE OF EITHER A FINAL ACTION
OR NOTICE OF ALLOWANCE (37 C.F.R. § 1.97(c))**

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Date: October 13, 2006

Alexander J. Smolenski, Jr., Esq.
(type or print name of person certifying)

* Only the date of filing (' 1.6) will be the date used in a patent term adjustment calculation, although the date on any certificate of mailing or transmission under ' 1.8 continues to be taken into account in determining timeliness. See ' 1.703(j). Consider "Express Mail Post Office to Addressee" (' 1.10) or facsimile transmission (' 1.6(d)) for the reply to be accorded the earliest possible filing date for patent term adjustment calculations.

**TIME OF TRANSMITTAL OF ACCOMPANYING
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1. The supplemental information disclosure statement transmitted herewith is being filed *after* three months of the filing date of this national application or the date of entry of the national stage as set forth in Section 1.491 in an international application or after the mailing date of the first Office action on the merits, whichever event occurred last but *before* the mailing date of either
 - (1) a final action under § 1.113 or
 - (2) a notice of allowance under § 1.311whichever occurs first.

FEE

2. Accompanying this transmittal is the fee for submission of an information disclosure statement under section 1.97(c). (\$180.00)

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3. Applicant elects the option to pay the fee set forth in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under § 1.97(c) (\$180.00).

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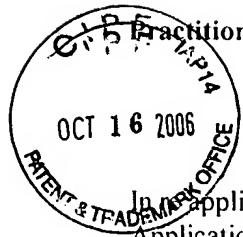
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Alexander J. Smolenski, Jr., Esq.
BROMBERG & SUNSTEIN LLP
Customer Number 02101
125 Summer Street
Boston, MA 02110-1618
US

02960/00112 559919.1



Practitioner's Docket No.: 2960/112

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In application of: Lang, et al
Application No.: 10/681,749 Group No.: 3733
Filed: October 7, 2003 Examiner: Philogene, P.
For: MINIMALLY INVASIVE JOINT IMPLANT WITH 3-DIMENSIONAL GEOMETRY
MATCHING THE ARTICULAR SURFACES

Attn: Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

(Supplemental Information Disclosure Statement--Page 1 of 23)

CERTIFICATION UNDER 37 C.F.R. SECTIONS 1.8(a) and 1.10*

*(When using Express Mail, the Express Mail label number is mandatory;
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37 C.F.R. SECTION 1.8(a)

37 C.F.R. SECTION 1.10*

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Date: October 13, 2006

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*WARNING: *Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. section 1.10(b).*

"Since the filing of correspondence under section 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will not be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

NOTE: "An information disclosure statement shall be considered by the Office if filed by the applicant:

- (1) Within three months of the filing date of a national application;
- (2) Within three months of the date of entry of the national stage as set forth in section 1.491 in an international application; or
- (3) Before the mailing date of a first Office action on the merits, whichever event occurs last." 37 C.F.R. section 1.97(b).

NOTE: "Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section." 37 C.F.R. section 1.56(a).

"Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) each inventor named in the application;
- (2) each attorney or agent who prepares or prosecutes the application; and
- (3) every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application." 37 C.F.R. section 1.56(c).

NOTE: The "duty as described in section 1.56 will be met so long as the information in question was cited by the Office or submitted to the Office in the manner prescribed by sections 1.97(b) - (d) and 1.98 before issuance of the patent." Notice of January 9, 1992, 1135 O.G. 13-25 at 17.

WARNING: "No information disclosure statement may be filed in a provisional application." 37 C.F.R. section 1.51(b).

List of Sections Forming Part of This Supplemental Information Disclosure Statement

The following sections are being submitted for this Supplemental Information Disclosure Statement:

(check sections forming a part of this statement: discard unused sections and number pages consecutively)

1. Preliminary Statements
2. Forms PTO/SB/08A and 08B (substitute for Form PTO-1449)
3. Statement as to Information Not Found in Patents or Publications
4. Identification of Prior Application in Which Listed Information Was Already Cited and for Which No Copies Are Submitted or Need Be Submitted
5. Cumulative Patents or Publications
6. Copies of Listed Information Items Accompanying This Statement
7. Concise Explanation of Non-English Language Listed Information Items
 - 7A. International Search Report
 - 7B. English Language Version of International Search Report
8. Translation(s) of Non-English Language Documents
9. Concise Explanation of English Language Listed Information Items (Optional)
10. Identification of Person(s) Making This Supplemental Information Disclosure Statement

(complete the following, if appropriate)

Sections , respectively, have been continued on ADDED PAGE(S).

NOTE :"Once the minimum requirements are met, the examiner has an obligation to consider the information." Notice of April 20, 1992 (1138 O.G. 37-41, 37).

Section 1. Preliminary Statements

Applicants submit herewith patents, publications or other information, of which they are aware that they believe may be material to the examination of this application, and in respect of which, there may be a duty to disclose.

The filing of this supplemental information disclosure statement shall not be construed as a representation that a search has been made (37 C.F.R. section 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability, or that no other material information exists.

The filing of this supplemental information disclosure statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13-25, at 25.

SECTION 2. FORMS PTO/SB/08A and 08B (formerly Form PTO-1449)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Lang, et al. Attorney Docket: 2960/112
 Serial No: 10/681,749 Art Group Unit: 3733
 Date Filed: October 7, 2003 Examiner Name: Philogene, P.
 Invention: Minimally Invasive Joint Implant with 3-Dimensional Geometry Matching
 The Articular Surfaces



**LIST OF PATENTS AND PUBLICATIONS FOR
 APPLICANT'S SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

U.S. PATENT DOCUMENTS					
Examiner Initials	Reference Number	Document Number	Issue Date	Inventor	Class/Subclass
	FV	US 4,655,227	April, 1987	Gracovetsky, S.	128/781
	FW	US 4,699,156	October, 1987	Gracovetsky, S.	128/781
	FX	US 4,813,436	March, 1989	Au, J.	128/779
	FY	US 4,823,807	April, 1989	Russell, et al.	128/773
	FZ	US 5,099,859	March, 1992	Bell, G.	128/781
	GA	US 5,129,908	July, 1992	Petersen, T.	606/88
	GB	US 5,154,178	October, 1992	Shah, A.	128/653.2
	GC	US 5,246,013	September, 1993	Frank, et al.	128/774
	GD	US 5,320,102	June, 1994	Paul, et al.	128/653.2
	GE	US 5,413,116	May, 1995	Radke, et al.	128/777
	GF	US 5,433,215	July, 1995	Athanasiou, et al.	128/774
	GG	US 5,445,152	August, 1995	Bell, et al.	128/653.5
	GH	US 5,501,687	March, 1996	Willert, et al.	606/94
	GI	US 5,503,162	April, 1996	Athanasiou, et al.	128/774
	GJ	US 5,541,515	July, 1996	Tsujita, K.	324/318
	GK	US 5,564,437	October, 1996	Bainville, et al.	128/774
	GL	US 5,682,886	November, 1997	Delp, et al.	128/653.1
	GM	US 5,749,362	May, 1998	Funda, et al.	128/653.1
	GN	US 5,749,876	May, 1998	Duvillier, et al.	606/88
	GO	US 5,772,595	June, 1998	Votruba, et al.	600/415
	GP	US 5,779,651	July, 1998	Buschmann, et al.	600/587
	GQ	US 5,810,006	September, 1998	Votruba, et al.	128/653.2
	GR	US 5,824,085	October, 1998	Sahay, et al.	623/16
	GS	US 5,840,443	November, 1998	Gregg, et al.	429/212
	GT	US 5,880,976	March, 1999	DiGioia III, et al.	364/578
	GU	US 5,885,296	March, 1999	Masini	606/86
	GV	US 5,885,298	March, 1999	Herrington, et al.	606/88
	GW	US 5,897,559	April, 1999	Masini, M.	606/86

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U.S. PATENT DOCUMENTS					
Examiner Initials	Reference Number	Document Number	Issue Date	Inventor	Class/Subclass
	GX	US 5,899,859	May, 1999	Votruba, et al.	600/415
	GY	US 5,913,821	June, 1999	Farese, et al.	600/425
	GZ	US 5,916,220	June, 1999	Masini, M.	606/88
	HA	US 5,928,945	July, 1999	Seliktar, et al.	435/395
	HB	US 5,961,523	October, 1999	Masini	606/86
	HC	US 5,968,051	October, 1999	Luckman, et al.	606/88
	HD	US 5,995,738	November, 1999	DiGioia III, et al.	395/500.32
	HE	US 6,002,859	December, 1999	DiGioia III, et al.	395/500.32
	HF	US 6,078,680	June, 2000	Yoshida, et al.	382/128
	HG	US 6,102,916	August, 2000	Masini	606/88
	HH	US 6,146,422	November, 2000	Lawson, K.	623/17.16
	HI	US 6,156,069	December, 2000	Amstutz	623/22.11
	HJ	US 6,161,080	December, 2000	Aouni-Ateshian, et al.	703/11
	HK	US 6,175,655	January, 2001	George III, et al.	382/257
	HL	US 6,187,010	February, 2001	Masini	606/86
	HM	US 6,205,411	March, 2001	DiGioia III, et al.	703/11
	HN	US 6,249,692	June, 2001	Cowin, S.	600/407
	HO	US 6,289,753	September, 2001	Basser, et al.	73/866
	HP	US 6,310,477	October, 2001	Schneider, E.	324/307
	HQ	US 6,310,619	October, 2001	Rice, R.	345/420
	HR	US 6,316,153	November, 2001	Goodman, et al.	430/8
	HS	US 6,334,006	December, 2001	Tanabe, K.	385/12
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	HU	US 6,450,978	September, 2002	Brosseau, et al.	600/595
	HV	US 6,533,737	March, 2003	Brosseau, et al.	600/595
	HW	US 6,560,476	May, 2003	Pelletier, et al.	600/410
	HX	US 6,626,945	September, 2003	Simon, et al.	623/17.19
	HY	US 6,712,856	March 30, 2004	Carignan, et al.	623 20.35
	HZ	US 6,799,066	September, 2004	Steines, et al.	600/407
	IA	US 6,916,341	July 12, 2005	Rolston	623 20.3

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	IB	US 2001/0001120	May, 2001	Masini	606/86
	IC	US 2002/0147392	October, 2002	Steines, et al.	600/407
	ID	US 2002/0016543	February 7, 2002	Tyler	600/410
	IE	US 2002/0127264	Sept. 12, 2002	Felt, et al.	424/423
	IF	US 2002/0147392	October 10, 2002	Steines, et al.	600/407
	IG	US 2002/0173852	Nov. 21, 2002	Felt, et al.	623/20.32
	IH	US 2002/0177770	Nov. 28, 2002	Lang, et al.	600/410
	II	US 2003/0015208	January 23, 2003	Lang, et al.	128/922
	IJ	US 2003/0158606	August 21, 2003	Coon, et al.	623/20.15
	IK	US 2003/0225457	Dec. 4, 2003	Justin, et al.	623 20.14
	IL	US 2004/0102852	May 27, 2004	Johnson, et al.	623/20.15
	IM	US 2004/0122521	June 24, 2004	Lee, et al.	623/20.15
	IN	US 2004/0153162	August 5, 2004	Sanford, et al.	623/20.3
	IO	US 2004/0153164	August 5, 2004	Sanford, et al.	623/20.29
	IP	US 2004/0167390	August 26, 2004	Alexander, et al.	600/410
	IQ	US 2004/0167630	August 26, 2005	Rolston	623/20.14
	IR	US 2004/0193280	Sept. 30, 2004	Webster, et al.	623/20.33
	IS	US 2005/0015153	January 20, 2005	Goble, et al.	623/23.46
	IT	US 2005/0107883	May 19, 2005	Goodfried, et al.	623/20.15
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	IV	US 2005/0171612	August 4, 2005	Rolston	623/20.19

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	IW	WO	98/12994	April, 1998	Eriksson, I.	A61F 2/28, 2/32
	IX	WO	00/35346	June 22, 2000	Moran, T.	A61B 511
	IY	WO	01/10356	February, 2001	Ticulate Holdings, Ltd.	A61F 2/46

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	IZ	WO	02/22013	March, 2002	Leland Stanford Junior University	A61B 5/055
	JA	WO	03/47470	March 14, 2003	British American Tobacco	206/268

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	JB	ADAM, et al.	"NMR Tomography Of The Cartilage Structures Of The Knee Joint With 3D-Volume Imag Combined With A Rapid Optical-Imaging Computer," ROFO Fortschr. Geb. Rontgenstr. Nuklearmed; 150(1): 44-48 (1989)			
	JC	ADAM, G., et al.	"MR Imaging of the Knee: Three-Dimensional Volume Imaging Combined with Fast Processing", J. Compyt. Asst. Tomogr; : 984-988 (Nov.-Dec. 1989)			
	JD	ADAMS, ME, et al.	"Quantitative Imaging of Osteoarthritis", Semin Arthritis Rheum June; 20(6) Suppl. 2: 26-39 (1991)			
	JE	AHMAD, CS, et al.	"Biomechanical and Topographic Considerations for Autologous Osteochondral Grafting in the Knee", Am J Sports Med Mar-Apr.; 29(2): 201-206 (2001)			
	JF	ALEXANDER, E.J., et al.	"Internal To External Correspondence In The Analysis Of Lower Limb Bone Motion", Proceedings of the 1999 ASME Summer Bioengineering Conference, Big Sky, Montana (1999)			
	JG	ALEXANDER, E.J., et al.	"Correcting for Deformation In Skin-Based Marker Systems", Proceedings of the 3 rd Annual Gait and Clinical Movement Analysis Meeting, San Diego, CA (1998)			
	JH	ALEXANDER, E.J.,	"Estimating The Motion Of Bones From Markers Of Bones From Markers On The Skin (Doctoral Dissertation)", U. of Illinois at Chicago (1998)			
	JI	ALEXANDER, E.J., et al.	"State Estimation Theory In Human Movement Analysis", Proceedings of the 1998 ASME International Mechanical Engineering Congress (1998)			
	JJ	ALEXANDER, et al.	"Dynamic Functional Imaging Of The Musculoskeletal System", ASME Winter International Congress and Exposition, Nashville, TN (1999)			
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	JL	ALLEN, et al.	"Late Degenerative Changes After Meniscectomy 5 Factors Affecting The Knee After Operations", J Bone Joint Surg 66B: 666-671 (1984)			

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	JM	ALLEY, et al.	"Ultrafast Contrast-Enhanced Three Dimensional MR Aangiography: State Of The Art," <i>Radiographics</i> 18: 273-285 (1998)
	JN	ANDRIACCHI, et al.	"Gait Analysis As A Tool To Assess Joint Kinetics Biomechanics Of Normal And Pathological Human Articulating Joints", Nijhoff, Series E 93:83-102 (1985)
	JO	ANDRIACCHI, et al.	"In Vivo Measurement Of Six-Degrees-Of-Freedom Knee Movement During Functional Testing", Transactions of the Orthopedic Research Society: pp. 698 (1995)
	JP	ANDRIACCHI, et al.	"A Point Cluster Method For In Vivo Motion Analysis: Applied To A Study Of Knee Kinematics", <i>J. Biomech Eng.</i> 120(12):743-749 (1998)
	JQ	ANDRIACCHI, et al.	"Methods For Evaluating The Progression Of Osteoarthritis", <i>Journal of Rehabilitation Research and Development</i> 37(2): 163-170 (2000)
	JR	ANDRIACCHI, T.P.	"Dynamics of Knee Malalignment", <i>Orthop Clin North Am</i> 25: 395-403 (1994)
	JS	ARO HT, et al.	"Clinical Use of Bone Allografts", <i>Ann Med</i> 25: 403-412, (1993)
	JT	BASHIR, et al.	"Validation of Gadolinium-Enhanced MRI of GAG Measurement in Human Cartilage"
	JU	BEAULIEU, et al.,	"Dynamic Imaging Of Glenohumeral Instability With Open MRI" Int. Society For Magnetic Resonance In Medicine, Sydney, AU (1998)
	JV	BEAULIEU, et al.	"Glenohumeral Relationships During Physiological Shoulder Motion And Stress Testing: Initial Experience With Open MRI And Active Scan-25 Plane Registration" Radiology (accepted for publication) (1999)
	JW	BECKMANN, et al.	"Noninvasive 3D MR Microscopy as Tool in Pharmacological Research: Application to a Model of Rheumatoid Arthritis", <i>Magn Reson Imaging</i> 13 (7): 10-13-1017 (1995)
	JX	BOBIC, V.	"Arthroscopic Osteochondral Autograft Transplantation In Anterior Cruciate Ligament Reconstruction: A Preliminary Clinical Study", <i>Knee Surg. Sports Traumatol Arthrosc</i> 3(4): 262-264 (1996)
	JY	BOE, S., et al.	"Arthroscopic Partial Meniscectomy In Patients Aged Over 50", <i>J. Bone Joint Surg.</i> 68B: 70-7 (1986)
	JZ	BORTHAKUR, et al.	"In Vivo Triple Quantum Filtered Sodium MRI of Human Articular Cartilage", Seventh Scientific Meeting of ISMRM, p. 549 (1999)
	KA	BREGLER, et al.	"Recovering Non-Rigid 3D Shape From Image Streams", Proc IEEE Conference on Computer Vision and Pattern Recognition (2000) in press
	KB	BRET, et al.	"Quantitative Analysis Of Biomedical Images", U. of Manchester, Zeneca Pharmaceuticals, IBM UK, http://www.wian.man.ac.uk/~ads/imv
	KC	BRITTBURG, et al.	"A Critical Analysis Of Cartilage Repair", <i>Acta Orthop Scand</i> 68 (2): 186-191 (1997)

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	KD	BRITTBURG, et al.	"Treatment Of Deep Cartilage Defects In The Knee With Autologous Chondrocyte Transplantation", N. Eng. J. Med. 331(14): 889-895 (1994)
	KE	BRODERICK, et al.	"Severity Of Articular Cartilage Abnormality In Patients With Osteoarthritis: Evaluation With Fast Spin-Echo MR Vs Arthroscopy", AJR 162: 99-103 (1994)
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	KG	BUTTERWORTH, et al.	Depts. of Biomedical Engineering, Medicine, Neurology, & Center for Nuclear Imaging Research, U. of Alabama at Birmingham, USA
	KH	BUTTS, et al.	"Real-Time MR Imaging Of Joint Motion On An Open MR Imaging Scanner", Radiological Society of North America, 83 rd Scientific Assembly and Annual Meeting, Chicago, IL, (1997)
	KI	CARANO, et al.	"Estimation Of Erosive Changes In Rheumatoid Arthritis By Temporal Multispectral Analysis", Seventh Scientific Meeting of ISMRM, p. 408, (1999)
	KJ	CASTRIOTA-SCANDERBEG, A., et al.	"Precision of Sonographic Measurement of Articular Cartilage: Inter-and Intraobserver Analysis", Skeletal Radiol, 25: 545-549 (1996)
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	KL	CLARKE, IC, et al.	"Human Hip Joint Geometry and Hemiarthroplasty Selection", The Hip. C.V. Mosby, St. Louis, pp. 63-89 (1975)
	KM	COHEN, et al.	"Knee Cartilage Topography, Thickness, And Contact Areas From Mri: In-Vitro Calibration And In-Vivo Measurements", Osteoarthritis and Cartilage 7:95-109 (1999)
	KN	CREAMER, P., et al.	"Quantitative Magnetic Resonance Imaging of the Knee: A Method of Measuring Response to Intra-Articular Treatments", Ann Rheum Dis., 56; 378-381 (1997)
	KO	DANIEL, et al.	"Breast Cancer-Gadolinium-Enhanced MR Imaging With A 0.5T Open Imager And Three-Point Dixon Technique", Radiology, 207(1): 183-190 (1998)
	KP	DARDZINSKI, et al.	"Entropy Mapping of Articular Cartilage", ISMRM Seventh Scientific Meeting, Philadelphia, PA (1999)
	KQ	DARDZINSKI, et al.	"T1-T2 Comparison in Adult Articular Cartilage", ISMRM Seventh Scientific Meeting, Philadelphia, PA (May 22-28, 1999)
	KR	DISLER, et al.	"Detection Of Knee Hyaline Cartilage Defects Using Fat-Suppressed Three-Dimensional Spoiled Gradient-Echo MR Imaging: Comparison With Standard MR Imaging And Correlation With Arthroscopy", AJR 165: 377-382 (1995)
	KS	DISLER, et al.	"Fat-Suppressed Three-Dimensional Spoiled Gradient-Echo MR Imaging Of Hyaline Cartilage Defects In The Knee: Comparison With Standard MR Imaging And Arthroscopy", AJR 167: 127-132 (1996)

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	KT	DISLER, D.G.	"Fat-Suppressed Three-Dimensional Spoiled Gradient-Recalled MR Imaging: Assessment Of Articular And Physseal Hyaline Cartilage" AJS 169: 1117-1123 (1997)
	KU	DOHERTY, M., et al.	MT: Osteoarthritis. In: Maddison, PJ, Isenberg, DA, Woo, P., et al., eds. Oxford Textbook of Rheumatology, Vol. 1., Oxford, NY, Tokyo; Oxford U. Press, 959-983 (1993)
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	LF	ECKSTEIN, et al.	"In Vivo Reproducibility Of Three-Dimensional Cartilage Volume And Thickness Measurements With Mr Imaging". AJR 170(3): 593-597 (1998)
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	LK	ECKSTEIN, et al.	"The Influence of Geometry on the Stress Distribution in Joints – A Finite Element Analysis", <i>Anat Embryol</i> , 189: 545-552 (1994)
	LL	ECKSTEIN, et al.	"The Morphology of Articular Cartilage Assessed by Magnetic Resonance Imaging: Reproducibility and Anatomical Correlation", <i>Sur. Radiol Anat</i> , 16: 429-438 (1994)
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	LN	FABER, et al.	"Gender Differences In Knee Joint Cartilage Thickness, Volume And Articular Surface Areas: Assessment With Quantitative Three-Dimensional MR Imaging", <i>Skeletal radiology</i> 30 (3): 144-150 (2001)
	LO	FABER, et al.	"Quantitative Changes of Articular Cartilage Microstructure During Compression of an Intact Joint", Seventh Scientific Meeting of ISMRM, p. 547 (1999)
	LP	FALCAO, et al.	"User-Searched Image Segmentation Paradigms: Live Wire And Live Lane", <i>Graphical Models and Image Processing</i> 60:233-260 (1998)
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	LR	GANDY, et al.	"One-Year Longitudinal Study Of Femoral Cartilage Lesions In Knee Arthritis", Seventh Scientific Meeting of ISMRM, p. 1032, (1999)
	LS	GARRETT, J.C.	"Osteochondral Allografts For Reconstruction Of Articular Defects Of The Knee", <i>Instr Course Lect</i> 47:51-522 (1998)
	LT	GERSCOVICH, E.O.	"A Radiologist's Guide To The Imaging In The Diagnosis And Treatment Of Developmental Dysplasia Of The Hip" <i>Skeletal Radiol</i> , 26: 447-456 (1997)
	LU	GHOSH, et al.	"Watershed Segmentation Of High Resolution Articular Cartilage Images For Assessment Of Osteoarthritis", <i>International Society for Magnetic Resonance in Medicine, Philadelphia</i> (1999)
	LV	GLASER, et al.	"Optimization And Validation Of A Rapid Highresolution T1-W 3-D Flash Waterexcitation MR Sequence For The Quantitative Assess-Ment Of Articular Cartilage Volume And Thickness" <i>Magnetic Resonance Imaging</i> , 19: 177-185 (2001)
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	ME	HARGREAVES, et al.	"Technical Considerations For DEFT Imaging", International Society for Magnetic Resonance in Medicine, Sydney, AU, pp. 17-24 (Apr., 1998)
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	MI	HENKELMAN, et al.	"Anisotropy Of NMR Properties Of Tissues", Magn Res Med. 32: 592-601 (1994)
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	MK	HERBERHOLD, et al.	"In Situ Measurement Of Articular Cartilage Deformation In Intact Femorapatellar Joints Under Static Loading", Journal of Biomechanics 32: 1287-1295 (1999)
	ML	HERRMANN, J.M., et al.	"High Resolution Imaging of Normal and Osteoarthritic Cartilage with Optical Coherence Tomography", J. Rheumatol, 26: 627-635 (1999)
	MM	HIGH, et al.	"Early Macromolecular Collagen Changes in Articular Cartilage of Osteoarthritis (OA): An In Vivo MT-MRI and Histopathologic Study"
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	MQ	IIHARA, H.	"Double-Contrast CT Arthrography of the Cartilage of the Patellofemoral Joint", Clin. Orthop., 198: 50-55 (Sept., 1985)
	MR	IIDA, H., et al.	"Socket Location in Total Hip Replacement: Preoperative Computed Tomography and Computer Simulation" Acta Orthop Scand, 59(1): 1-5 (1988)
	MS	IRARRAZABAL, et al.	"Fast Three-Dimensional Magnetic Resonance Imaging", Mag. Res. Med. 33: 656-662 (1995)
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	MU	JOHNSON, et al.	"The Distribution Of Load Across The Knee. A Comparison Of Static And Dynamic Measurements", J. Bone Joint Sur. 62B: 346-349 (1980)
	MV	JOHNSON, T.S.	"In Vivo Contact Kinematics Of The Knee Joint: Advancing The Point Cluster Technique", Ph.D. Thesis, U. of Minnesota (1999)
	MW	JONSSON, K., et al.	"Precision of Hyaline Cartilage Thickness Measurements", Acta Radiol; 33(3): 234-239 (1992)
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	MZ	KASS, et al.	"Snakes: Active Contour Models", Int. J. Comput. Vision 1: 321-331 (1988)
	NA	KLOSTERMAN, et al.	"T2 Measurements in Adult Patellar Cartilage at 1.5 and 3.0 Tesla", ISMRM Seventh Scientific Meeting, Philadelphia, PA, (May 22-28, 1999)
	NB	KNAUSS, et al.	"Self-Diffusion of Water in Cartilage and Cartilage Components as Studied by Pulsed Field Gradient NMR", Magnetic Resonance in Medicine 41:285-292 (1999)
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	NH	LAFORTUNE, et al.	"Three Dimensional Kinematics Of The Human Knee During Walking", J. Biomechanics 25: 347-357 (1992)
	NI	LANG, et al.	"Cartilage Imaging: Comparison Of Driven Equilibrium With Gradient-Echo, SPAR, And Fast Spin-Echo Sequences", International Society for Magnet Resonance in Medicine, Sidney, Australia, April 17-24, (1998)
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	NK	LANG, et al.	"Risk Factors For Progression Of Cartilage Loss: A Longitudinal MRI Study", European Society of Musculoskeletal Radiology, 6 th Annual Meeting, Edinburgh, Scotland (1999)
	NL	LEDINGHAM, et al.	"Factors affecting radiographic progression of knee osteoarthritis", Ann. Rheum Dis. 54: 53-58 (1995)
	NM	LEFEBVRE, F., et al.	"Automatic Three-Dimensional Reconstruction and Characterization of Articular Cartilage from High-Resolution Ultrasound Acquisitions", Ultrasound Med. Biol.; 24(9): 1369-1381 (Nov., 1998)
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	NO	LIN, C.J., et al.	"Three-Dimensional Characteristics of Cartilaginous and Bony Components of Dysplastic Hips in Children: Three-Dimensional Computed Tomography Quantitative Analysis", J. Pediatr. Orthop.; 17: 152-157 (1997)
	NP	LORENSEN, et al.	"Marching Cubes: A High Resolution 3d Surface Construction Algorithm", Comput. Graph 21: 163-169 (1987)
	NQ	LOSCH, et al.	"A Non-Invasive Technique For 3-Dimensional Assessment Of Articular Cartilage Thickness Based On MRI Part 1:Development Of A Computational Method", Magn. Res. Imaging 15(7): 795-804 (1997)
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	NV	MAKI, et al.	"SNR Improvement In NMR Microscopy Using DEFT", J. Mag. Res. (1988)
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	NZ	MEYER, et al.	"Simultaneous Spatial And Spectral Selective Excitation", Magn. Res. Med. 15:287-304 (1990)
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	OB	MILZ, S., et al.	"The Thickness of the Subchondral Plate and Its Correlation with the thickness of the Uncalcified Articular Cartilage in the Human Patella", Anat. Embryol.; 192: 437-444 (1995)
	OC	MODEST, et al.	"Optical Verification of A Technique For In Situ Ultrasonic Measurement of Articular Cartilage Thickness", J. Biomechanics 22(2): Pp. 171-176 (1989)
	OD	MOLLICA, et al.	"Surgical Treatment Of Arthritic Varus Knee By Tibial Corticotomy And Angular Distraction With An External Fixator", Ital. J. Orthop. Traumatol 18 (1): 17-23 (1992)
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	OF	MUNDINGER, et al.	"Magnetic Resonance Tomography In The Diagnosis Of Peripheral Joints", Schweiz Med. Wochenschr. 121(15): 517-527 (1991)
	OG	MYERS, S.L., et al.	"Experimental Assessment by High Frequency Ultrasound of Articular Cartilage Thickness and Osteoarthritic Changes", J. Rheumatol; 22: 109-116 (1995)
	OH	NIEMINEN, et al.	"T2 Indicates Incompletely the Biomechanical Status of Enzymatically Degraded Articular Cartilage of 9.4T", Seventh Scientific Meeting of ISMRM, p. 551 (1999)
	OI	NISHII, et al.	"Three Dimensional Evaluation Of The Acetabular And Femoral Articular Cartilage In The Osteoarthritis Of The Hip Joint", Seventh Scientific Meeting of ISMRM, p. 1030 (1999)

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	OP	PETERFY, et al.	"MR Imaging Of The Arthritic Knee: Improved Discrimination Of Cartilage, Synovium, And Effusion With Pulsed Saturation Transfer And Fat-Suppressed TI-Weighted Sequences", Radiology 191(2): 413-419 (1994)
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	OT	PIPLANI, et al.	"Articular Cartilage Volume In The Knee: Semiautomated Determination From Three-Dimensional Reformations Of MR Images", Radiology 198: 855-859 (1996)
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	OV	POTTER, et al.	"Sensitivity of Quantitative NMR Imaging to Matrix Composition in Engineered Cartilage Tissue" Seventh Scientific Meeting of ISMRM, p. 552 (1999)
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	PD	RITTER, et al.	"Postoperative Alignment Of Total Knee Replacement", Clin. Orthop. 299: 153-156 (1994)
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	PI	SAITO, et al.	"New Algorithms For Euclidean Distance Transformation Of An N-Dimensional Digitized Picture With Applications", Pattern Recognition 27(11): 1551-1565 (1994)
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	PL	SHAPIRO, et al.	"In-Vivo Evaluation of Human Cartilage Compression and Recovery Using ¹ H and ²³ Na MRI", Seventh Scientific Meeting of ISMRM, p. 548 (1999)
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	PP	SLEMENDA, et al.	"Lower Extremity Lean Tissue Mass And Strength Predict Increases In Pain And In Functional Impairment In Knee Osteoarthritis", Arthritis Rheum 39(suppl): S212 (1996)
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	PR	SOLLOWAY, et al.	"The Use Of Active Shape Models For Making Thickness Measurements Of Articular Cartilage From MR Images", Magn. Reson. Med.; 37(6): 943-52 (June, 1997)
	PS	SOSLOWSKY, et al.	"Articular Geometry of the Glenohumeral Joint", Clin. Orthop.; 285: 181-190 (Dec., 1992)
	PT	SPOOR, et al.	"Rigid Body Motion Calculated from Spatial Coordinates of Markers", J. Biomechanics 13: 391-393 (1980)
	PU	STAMMBERGER, et al.	"A Method For Quantifying Time Dependent Changes In MR Signal Intensity Of Articular Cartilage As A Function Of Tissue Deformation In Intact Joints" Medical Engineering & Physics 20: 741-749 (1998)
	PV	STAMMBERGER, et al.	"A New Method for 3D Cartilage Thickness Measurement with MRI, Based on Euclidean Distance Transformation, and its Reproducibility in the Living", Sixth Scientific Meeting of ISMRM, p. 562 (1998)
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	PX	STAMMBERGER, et al.	"Elastic Registration Of 3D Cartilage Surfaces From MR Image Data For Detecting Local Changes Of The Cartilage Thickness", Magnetic Resonance in Medicine 44: 592-601 (2000)
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Applicants: Lang, et al. Attorney Docket: 2960/112
 Serial No: 10/681,749 Art Group Unit: 3733
 Date Filed: October 7, 2003 Examiner Name: Philogene, P.
 Invention: **Minimally Invasive Joint Implant with 3-Dimensional Geometry Matching
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Examiner Signature: _____

Date Considered: _____

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation *if not* in conformance and not considered. Include copy of this form with next communication to applicant.

Section 6. Copies of Listed Information Items Accompanying This Statement

NOTE: 37 C.F.R. section 1.98(a)(2) requires that any information disclosure statement filed under section 1.97 shall include: "A legible copy of: (I) Each U.S. and foreign patent; (ii) Each publication or that portion which caused it to be listed; and (iii) All other information or that portion which caused it to be listed, except that no copy of a U.S. patent application need be included . . ."

NOTE: The wording in section 1.98(a)(2)(iii) makes it clear that the requirement to submit a copy of each item of information listed in an information disclosure statement does not apply to the citation of a U.S. patent application. Notice of January 9, 1992, 1135 O.G. 13-25, at 14.

Legible copies of all items listed in Forms PTO/SB/08A and 08B (substitute for Form PTO-1449) accompany this information statement.

(complete the following, if applicable)

[x]Exception(s) to above:

U.S. patent citations are not included pursuant to the United State Patent and Trademarks Office's September 21, 2004 waiver of the copy requirement in 37 CFR 1.98 for cited pending U.S. patent citations when the patent citations are available in the USPTO's IFW system.

[]Items in prior application, from which an earlier filing date is claimed for this application, as identified in Section 4.

[]Cumulative patents or publications identified in Section 5.

Section 7A. Concise Explanation of Non-English Language Listed Information Items in EPO Search Report

The relevance with respect to the following citations listed on Forms PTO/SB/08A and 08B (substitute for PTO-1449):

is submitted on the basis of the accompanying:

(check the appropriate item)

- [x] International Search Reports that is in the English language,
- [] International Search Report that is not in the English language and that is accompanied also by an English language version of the EPO search report, that issued on the corresponding European patent application.

Section 10. Identification of Person(s) Making This Supplemental Information Disclosure Statement

The person making this certification is

(check each applicable item)

(a) [] the inventor(s) who signs below

SIGNATURE OF INVENTOR

(type name of inventor who is signing)

(b) [] an individual associated with the filing and prosecution of this application (37 C.F.R. section 1.56(c))

SIGNATURE OF INVENTOR

(type name of inventor who is signing)

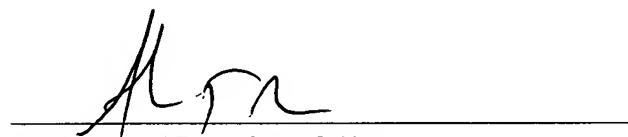
(c) [x] the practitioner who signs below on the basis of the information:

(check each applicable item)

[] supplied by the inventor(s).

[] supplied by an individual associated with the filing and prosecution of this application. (37 C.F.R. section 1.56(c)).

[x] in the practitioner's file.



SIGNATURE OF PRACTITIONER

Reg. No.: 47,953

Alexander J. Smolenski, Jr., Esq.

(type or print name of practitioner)

Tel. No.: (617) 443-9292

125 Summer Street, 11th Floor

P.O. Address

Customer No.: 002101

Boston, MA 02110-1618

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